

REMARKS

Applicant submits that the present application, as currently amended, is in condition for allowance.

Claims 1-18 are pending in the present application, with independent claims 1, 6 and 17 amended by the present amendment.

Claims 1-5 have been rejected under 35 U.S.C. § 103 as being unpatentable over Searby (EP 0589724, Applicants' disclosed related art (AAPA) and further in view of Patton et al. (U.S. Patent 6,795,209), Zhou (U.S. Pub. No. 2002/0015447) and Baggs et al. (U.S. Pub. No. 2003/0231801). Claims 6-17 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Searby, Patton et al., Zhou, Baggs et al. and further in view of Ishikawa (U.S. Pub. No. 2002/0140987). These rejections are respectfully traversed.

As a first point of order, Applicants acknowledge with appreciation the clarification of rejection provided in the Advisory Action of March 17, 2008 which explained that the Examiner considered Searby and AAPA to be one and the same.

Briefly recapitulating, claim 1 is directed to

An image scanning and processing system, comprising
a scanner for generating a stream of data encoding a scanned image;
a controller for controlling and processing data received from the scanner;
and

file storage means, wherein, in use, the stream of data is written to a master file saved in the file storage means, and the controller is configured to create a preview image with a lower data size than the scanned image from at least part of the data encoding the scanned image, wherein the controller is further configured *to extract* data encoding the preview image *directly from the stream of data*, and *to write the extracted data to a thumbnail file*.

Claim 6 is directed to

A method of scanning and processing an image, comprising:

scanning an original and thereby generating a stream of data;

encoding a scanned image;

saving the scanned image in a master file; and

creating a preview image with a lower data size than the scanned image from at least part of the data encoding the scanned image,

wherein data encoding the preview image is extracted directly from the stream of data, and written to a thumbnail file.

As noted in paragraph 005 of Applicants' originally filed specification, in AAPA, an initial high-resolution image is held in a high capacity storing unit. The system comprises a small capacity high speed storing unit and is arranged to transfer portions of the initial high-resolution image to the small capacity high speed storing unit a portion at a time. The system also comprises a viewing store for storing data representing an image to be displayed and a monitor for displaying the image. The system is arranged to operate in a preview mode. In this preview mode, image data is down converted and written to a destination area for output to the viewing store. The down-conversion of the data is performed by the control processor.

As noted in paragraph 006 of Applicants' originally filed specification, in the related art, if an operator wishes to select a section from the scanned image, a preview image of the entire scanned image would have to be created first. This requires processing of all the data comprised in the master file. From a display of the preview image, the user would be able to select a section of the scanned image. This could then be retrieved from the master file for display. But, such a process is time consuming and strains the processing capacity of the controller and its memory to the utmost. Additionally, if one wanted to check a second area, the whole process would have to be repeated again, rendering the system to be rather inefficient.

However, in Applicants' invention, as noted in paragraph 010 of Applicants' originally filed specification, a preview image is extracted from a stream of data, and written to a thumbnail file. Thus, a small file may be quickly made available. Even though it is a small file, the preview image is representative of an entire area of a scanned image. Because the preview file is created *directly from the stream of data*, it is available directly after, or even before the scanning is finished. Thus, the preview file can be used for a quick check of the scanning process without requiring processing of large amounts of data comprised in the master file.

Searby describes an electronic image processing system 1 that includes a large capacity store 2 including a source area 3 for storing data representing an initial image and a destination area 4 for storing data representing a modified image. A controller processor 5 translates calculates transformation parameters and controls the transfer of portions of initial image data to a high speed low capacity cache store 9. A spatial filter 10 transforms the data in the cache store 9 so that the modified image portion data is written to the destination area 4. The system of Searby is arranged to operate in a preview mode during which the user may experiment with transformations of the image without committing to a given transformation until he is satisfied with the effect. In this preview mode, image data from the source 3 is down converted, transformed and then written to the destination area of the source store 2 for output to the viewing store 7.¹

However, Searby does not disclose or suggest Applicants' claimed thumbnail file. Indeed, the Official Action provides no citation for Applicants' claimed thumbnail file. Furthermore, Searby does not disclose or suggest a controller that is configured to extract data

¹ Searby column 5, lines 6-20

encoding the preview image *directly from the stream of data* that is written to a master file.

Because Searby does not disclose or suggest extracting data *directly* from a stream of data, Searby also fails to disclose or suggest writing any corresponding *directly* extracted data to any file, let alone to Applicants' claimed thumbnail file.

Applicants have considered the remaining references and submit that the remaining references do not cure the deficiencies of Searby. As none of the cited art, individually or in combination, discloses or suggests at least the above-noted features of independent claims 1 and 6, Applicant submits the inventions defined by claims 1 and 6, and all claims depending therefrom, are not rendered obvious by the asserted references for at least the reasons stated above.²

Claim 17 is directed to

A method for selecting one of a plurality of master files comprising data encoding at least one scanned image, wherein the master file is created by scanning an original and thereby generating a stream of data, encoding a scanned image, and saving the scanned image in a master file, the method comprising:

providing *at least part of a thumbnail file* associated with one of the master files to an archive manager, said part of the thumbnail file including data encoding a preview image corresponding to the scanned image with a lower data size than the scanned image, whereby the archive manager can display the parts as survey previews to the user for selection,

wherein the data encoding the preview image is extracted directly from the stream of data.

Applicants submit that claim 17, and all claims depending therefrom, patentably define over the applied references for at least the reasons presented above relative to claims 1 and 6. .

² MPEP § 2142 "...the prior art reference (or references when combined) must teach or suggest all the claim limitations.

Conclusion

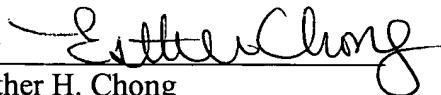
For the foregoing reasons and in view of the above clarifying amendments, the Examiner is respectfully requested to reconsider and withdraw all of the objections and rejections of record, and an early issuance of a Notice of Allowance is respectfully requested.

Should there be any matters which need to be resolved in the present application; the Examiner is respectfully requested to contact Michael E. Monaco, Registration No. 52,041, at the telephone number of the undersigned below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.14; particularly, extension of time fees.

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Respectfully submitted,

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